**Patent claims**

1. A hydraulic control arrangement using load-sensing technology, with a first directional control valve (28, 29), via which pressure medium can be supplied to a first hydraulic consumer, and with at least one further directional control valve (30, 31), via which pressure medium can be supplied to a further hydraulic consumer and which is preferably combined with the first directional control valve to form a valve block (15), with a load indication line, via which a control side of a load-sensing regulating valve (51, 53) can be acted upon by a control pressure dependent on the highest load pressure of the actuated hydraulic consumer and which has a first line segment (40) nearest to the regulating valve (51, 53) and having the control pressure and at least one further line segment (41, 42, 43), in each case a line segment being connectable via a changeover valve (35, 36, 37, 38) to the following line segment or an individual indication duct (44, 45, 46, 47) of a directional control valve, and with a pilot valve arrangement, by means of which the control pressure is limited to a limit pressure, characterized by the fact that, in the case of a defined pressure occurring in a further line segment (42) of the load indication line, the pilot valve arrangement can be set from a high first limit pressure to a lower second limit pressure, and that, as seen from the first line segment (40) of the load indication line,

the individual indication ducts (44, 45, 46, 47) can be connected to the successive line segments of the load indication line according to falling maximum load pressure of the hydraulic consumers.

2. The hydraulic control arrangement as claimed in claim 1, characterized by the fact that the pilot valve arrangement can be adjusted hydraulically via a control line (64) which is connected to the further line segment (42) of the load indication line.

3. The hydraulic control arrangement as claimed in claim 1 or 2, characterized by the fact that the pilot valve arrangement has a pilot valve (55) which is arranged between the first line segment (40) and a relief line (25) and the response pressure of which can be varied.

4. The hydraulic control arrangement as claimed in claim 3, characterized by the fact that the pilot valve has a moveable valve element (56) acted upon by a valve spring (57) in the direction of a closing position and by a pressure force at an active face in the direction of an opening position, and that the prestressing force of the valve spring (57) can be varied as a function of the pressure in the further line segment (42) of the load indication line.

5. The hydraulic control arrangement as claimed in claim 4, characterized by the fact that the prestressing of the valve spring (57) can be varied via an auxiliary piston (58) between two values defined by a first fixed abutment (77) and

a second fixed abutment (77, 81), that the auxiliary piston (58) has an active face which is larger than the active face on the valve element (56) and which can be relieved of pressure or can be acted upon with pressure as a function of the switching position of a reversing valve (60, 85), said switching position being determined by the pressure in the further line segment (42) of the load indication line, and that the auxiliary piston (58) can be displaced up to the activation of the second abutment (77, 81) with the effect of increasing the spring prestress.

6. The hydraulic control arrangement as claimed in claim 5, characterized by the fact that the two abutments (77, 81) are formed by two setscrews adjustable independently of one another.

7. The hydraulic control arrangement as claimed in claim 5 or 6, characterized by the fact that the valve spring (57) can be supported at the end remote from the valve element (56) by the auxiliary piston (58).

8. The hydraulic control arrangement as claimed in claim 7, characterized by the fact that the valve spring (57) can be supported via a spring plate (76) on the preferably screwed-in insert (77) which separates a spring space relieved of pressure from a control space (59) relieved of pressure or acted upon by pressure as a function of the position of the reversing valve (60, 85), that the auxiliary piston (58), sealingly guided slideably in an axial bore of the insert

(77), is arranged between the spring space and the control space (59), and that the spring plate (76) can be lifted off from the insert (77) by the auxiliary piston (58).

9. The hydraulic control arrangement as claimed in claim 8, characterized by the fact that the valve spring (57) can be supported via a spring plate (76) on a first rotatable screwable insert (77) which forms the first abutment and which separates a spring space relieved of pressure from a control space (59) relieved of pressure or acted upon by pressure as a function of the position of the reversing valve (60, 85), that the auxiliary piston (58), sealingly guided slideably in an axial bore of the insert (77), is arranged between the spring space and the control space (59), and that on that side of the first screwable insert (77) which faces away from the spring space is located a second rotatable screwable insert (81) which is preferably adjustable from outside and which forms the second abutment capable of being acted upon by the auxiliary piston (58).

10. The hydraulic control arrangement as claimed in claim 3, characterized by the fact that the pilot valve (55) has a moveable element (56) acted upon by a valve spring (57) in the direction of a closing position, that the valve element (56) can be acted upon in the opening direction by a pressure occurring, downstream of a nozzle (50), in the first line segment (40) of the load indication line and at a first control face, and that there is a second control face on an

auxiliary piston (58) which acts on the valve element (56) and which is relieved of pressure or can be acted upon by pressure as a function of the switching position of the reversing valve (60), said switching position being determined by the pressure in the further line segment (42) of the load indication line.

11. The hydraulic control arrangement as claimed in claim 10, characterized by the fact that the valve element (56) is acted upon in the closing position by pressure occurring at the second control face, and that the second control face is smaller than the first control face.

12. The hydraulic control arrangement as claimed in claim 11, characterized by the fact that a pressure-relieved spring space of the pilot valve (55) is sealed off, by means of an insert (77) preferably adjustable for varying the prestress of the valve spring (57), relative to a control space (59) relieved of pressure or acted upon by pressure, depending on the switching position of the reversing valve (60), and that an auxiliary piston (58) bearing against or firmly connected to the valve element (56) and having a cross-sectional face which is smaller than the first control face is sealingly guided slideably in a bore of the insert (77), said bore being open toward the control space (59).

13. The hydraulic control arrangement as claimed in one of claims 5 to 12, characterized by the fact that the reversing valve is a 2/2-way directional control valve (60) and is

arranged in series with a nozzle (61) between the load indication line and the relief line (25), and that the control space (59) on the auxiliary piston (58) is connected to the connection between the nozzle (61) and 2/2-way directional control valve (60).

14. The hydraulic control arrangement as claimed in one of claims 5 to 12, characterized by the fact that the reversing valve is a 3/2-way directional control valve (85) and connects a control space (59) on the auxiliary piston (58) to the load indication line in one switching position and to a relief line (25) in the other switching position.

15. The hydraulic control arrangement as claimed in claim 1 or 2, characterized by the fact that the pilot valve arrangement has a first pilot valve (55, 90) arranged between the first line segment (40) and a relief line (25) or connectable between these and a second pilot valve (86, 90) arranged between the load indication line and the relief line (25) or connectable between these, and that the response pressure of the second pilot valve (86, 90) is lower than the response pressure of the first pilot valve (55, 90).

16. The hydraulic control arrangement as claimed in claim 15, characterized by the fact that the two pilot valves are pressure limiting valves (55, 86), and that the second pilot valve (86) can be connected with its inlet to the first line segment (40) via a reversing valve (60) switchable as a function of the pressure occurring in a further line segment

(42) of the load indication line.

17. The hydraulic control arrangement as claimed in claim 16, characterized by the fact that the second pilot valve (86) is connected with its inlet, downstream of a nozzle (87), to a first further line segment (41), and that the reversing valve (60), as a function of the pressure occurring in a further line segment (42) following the first further line segment (41) to the rear, connects or separates the first line segment (40) or an individual indication duct (44) connectable to the latter, downstream of a nozzle (50, 88) located in said indication duct, to or from the inlet of the second pilot valve (86).

18. The hydraulic control arrangement as claimed in claim 15, characterized by the fact that the second pilot valve (90) is arranged between the first line segment (40) and a relief line (25), and that its moveable valve element can be acted upon in the closing direction by a valve spring (91) and in the opening direction by the pressure occurring in the further line segment (42, 43).

19. The hydraulic control arrangement as claimed in a preceding claim, characterized by the fact that the pilot valve arrangement is assigned locally to a directional control valve (28) having a single-acting function.

20 The hydraulic control arrangement as claimed in claim 19, characterized by the fact that the pilot valve arrangement (55) is arranged with its axis in or parallel to

a plane spanned by the axis of the directional control valve (28) and a working connection, preferably parallel to the axis of the directional control valve.

21. The hydraulic control arrangement as claimed in claim 20, characterized by the fact that the reversing valve (60) is arranged with its axis perpendicular to the plane.